

**Iowa Department of Natural Resources**  
**Wastewater Section**  
**Construction Permit Application**  
**SCHEDULE M, Fixed Film Reactor – Stationary Media**

DATE PREPARED	PROJECT IDENTITY	DNR USE
DATE REVISED		PROJECT NO.
		PERMIT NO.

1. Design Loadings: (waste entering reactor unit operation)
- |                          | <u>ADW</u> | <u>AWW</u> | <u>MWW</u> | <u>PHWW</u> |
|--------------------------|------------|------------|------------|-------------|
| Flow, MGD                | _____      | _____      | _____      | _____       |
| BOD <sub>5</sub> , mg/l  | _____      | _____      | _____      | _____       |
| TSS, mg/l                | _____      | _____      | _____      | _____       |
| NH <sub>3</sub> -N, mg/l | _____      | _____      | _____      | _____       |
| Design Temp. _____ °F    | _____      | _____      | _____      | _____       |
2. Reactor unit operation follows \_\_\_\_\_ and precedes \_\_\_\_\_
3. Design data: First stage \_\_\_\_\_ Second stage \_\_\_\_\_

	Unit 1	Unit 2	Unit 3
Specify whether new or existing			
Classification			
Dimensions			
Surface Area (ft <sup>2</sup> )			
Media Depth (ft.)			
Media Volume (1,000 ft <sup>3</sup> )			
Media: A. Type			
B. Size			
C. Grading			
Type of Distributor			
Activated by			
BOD Loading (#/D/1,000 ft <sup>3</sup> )			
Hydraulic Loading (gpm/ft <sup>2</sup> )			
Underdrainage: A. Type			
B. Slope			
C. Min. Channel Velocity			
Recirculation Ratio			

4. Method of reactor flooding \_\_\_\_\_
5. Ventilation provisions \_\_\_\_\_
6. Type of cover provided \_\_\_\_\_
7. Is service bypass provided? \_\_\_\_\_ Discharge to \_\_\_\_\_
8. Recirculation Pumps

Pump No.	Location	Type	Capacity (GPM)	TDH (ft)		Discharged to
				Rated	Computed	
1						
2						
3						
4						